

WHAT IS CLAIMED IS:

1 1. A method of counteracting the lack of balance  
2 of a rotary drive [for a reciprocable ledger guiding at  
3 least one continuous rod which advances lengthwise in  
4 a predetermined direction, at a predetermined speed and  
5 along a predetermined path and is repeatedly severed  
6 by an implement moving cyclically in and counter to said  
7 direction and arranged to sever the rod while advancing  
8 along a portion of said path, at said speed and in said  
9 direction] comprising the steps of:

10 orbiting a ledger-reciprocating component of the  
11 drive and a first counterpoise for the drive about a  
12 first axis; and

13 orbiting a second counterpoise for the drive in  
14 synchronism with the first counterpoise about a second  
15 axis remote from the first axis.

1           2. The method of claim 1, wherein the drive in-  
2 cludes a crank mechanism.

1           3. The method of claim 1, further comprising the  
2 steps of establishing a torque-transmitting connection  
3 between the drive and at least one further counterpoise  
4 and orbiting the at least one further counterpoise in  
5 synchronism with the first counterpoise.

1           4. The method of claim 3, wherein said orbiting  
2 steps include orbiting the first, second and further coun-  
3 terpoises about at least substantially parallel axes.

1           5. The method of claim 3, wherein said step of  
2 orbiting the at least one further counterpoise includes  
3 orbiting the at least one further counterpoise about  
4 the first axis.

1           6. The method of claim 1, wherein said first and  
2 second axes are parallel to each other.

1           7. The method of claim 1, wherein said step of  
2 orbiting the second counterpoise includes transmitting  
3 torque from the drive to the second counterpoise.

1           8. The method of claim 1, wherein said orbiting  
2 steps include causing one of the counterpoises to orbit about  
3 the respective axis in a clockwise direction and causing  
4 the other counterpoise to orbit about the respective  
5 axis in a counterclockwise direction.

1           9. The method of claim 1, wherein the rod is se-  
2 lected from the group consisting of tubes, rods contain-  
3 ing filter material for tobacco smoke and rods contain-  
4 ing smokable material.

Sub 33  
10. Apparatus for subdividing at least one  
2 running rod into sections of predetermined length,  
3 comprising:

4 an unbalanced drive including an output member  
5 rotatable about a first axis;

6 a mobile ledger for the at least one rod, said  
7 ledger being reciprocable back and forth in and counter  
8 to a predetermined direction and receiving motion from  
9 said output member; and

10 means for compensating for the lack of balance  
11 of said drive, including

12 a first counterpoise arranged to orbit about  
13 said first axis, and

14 a second counterpoise arranged to orbit about  
15 a second axis in synchronism with said first coun-  
16 terpoise, said second axis being spaced apart from  
17 said first axis.

1 11. The apparatus of claim 10, further comprising  
2 at least one severing implement arranged to reciprocate  
3 with said ledger and to sever the at least one rod  
4 during movement in said predetermined direction.

1 12. The apparatus of claim 10, wherein said  
2 unbalanced drive includes a crank mechanism having a  
3 crank arm coupling said ledger with said output member.

1 13. The apparatus of claim 12, wherein said crank  
2 arm includes a first portion arranged to orbit about  
3 said first axis and a second portion connected with said  
4 ledger.

1 14. The apparatus of claim 13, wherein said  
2 ledger includes at least one guide for the at least one  
3 rod and a flexible carrier for said at least one guide.

1 15. The apparatus of claim 14, wherein said car-  
2 rier comprises at least one leaf spring.

1           16. The apparatus of claim 10, further comprising  
2 a shaft rotatable about said second axis and mounting  
3 said second counterpoise, and means for rotating said  
4 shaft in synchronism with said output member.

1           17. The apparatus of claim 16, wherein said means  
2 for rotating said shaft comprises an endless flexible  
3 torque transmitting element.

1           18. The apparatus of claim 17, wherein said  
2 torque transmitting element comprises a V-belt.

1           19. The apparatus of claim 16, wherein said  
2 output member is arranged to rotate in a first direction  
3 and said means for rotating includes means for rotating  
4 said shaft in a second direction counter to said first  
5 direction.

1           20. The apparatus of claim 10, wherein said com-  
2       pensating means further includes at least one further  
3       counterpoise and means for orbiting said at least one  
4       further counterpoise in synchronism with one of said  
5       first and second counterpoises.

1           21. The apparatus of claim 20, wherein said means  
2       for orbiting said at least one further counterpoise in-  
3       cludes a kinematic connection between said output member  
4       and said at least one further counterpoise.

1           22. The apparatus of claim 21, further comprising  
2       an additional shaft eccentrically mounting said at least  
3       one further counterpoise and rotatable by said output  
4       member about a further axis spaced apart from said  
5       second axis.

1           23. The apparatus of claim 22, wherein said fur-  
2       ther axis coincides with one of said first and second  
3       axes.

1           24. The apparatus of claim 20, wherein said at  
2           least one further counterpoise is arranged to orbit  
3           about said first axis and is spaced apart from said  
4           first counterpoise in the direction of said first axis.

1           25. The apparatus of claim 24, wherein said at  
2           least one further counterpoise is angularly offset  
3           relative to said first counterpoise circumferentially  
4           of said first axis.

1           26. The apparatus of claim 10, wherein said first  
2           and second counterpoises respectively have first and  
3           second centers of gravity, said centers of gravity being  
4           disposed in a common plane.

1           27. The apparatus of claim 26, wherein said  
2           common plane is an at least substantially vertical  
3           plane.



1           28. The apparatus of claim 26, wherein said  
2    ledger comprises two at least substantially tubular  
3    guides for two discrete rods and a common flexible  
4    carrier for said guides.

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